

4-Port Combo Ethernet USB Wireless ADSL Router



AT-ARW256E

Quick Installation Guide

Version 1.0

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- Product warranty does not apply to damage caused by lightning, power surges or wrong voltage usage.
- This product is for use only in UL Listed computers.

Introduction

Thank you on your purchase of the 4-Port Combo Ethernet USB Wireless ADSL Router! The Wireless ADSL Router allows you to share high-speed broadband connection with multiple PC using a single device wired or wireless.

The 4-Port Combo Ethernet USB Wireless ADSL Router can be connected to any computer/notebook with a 10/100 Base-T Ethernet card or USB port for wired connection or an IEEE 802.11b/g Wireless adapter. The Ethernet ports have Auto MDI/MDIX feature which can allow both cross or straight UTP cable to be utilized. The 4-Port Combo Ethernet USB Wireless ADSL Router has an in-built IEEE802.11g Wireless LAN Access Point for wireless connectivity.

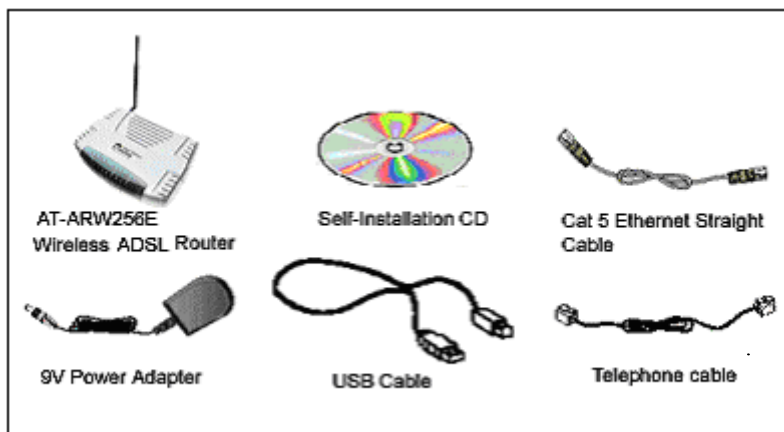
This documentation assumes that you have already installed an Ethernet card or a wireless adapter on your computer/notebook

Minimum System Requirements

- Pentium® MMX 233MHz
- Ethernet card installed with TCP/IP Protocol (Required only if you are connecting to the ETHERNET port of your DSL Router)
- Single USB port
- IEEE 802.11b Wireless adapter (Required if you are connecting to the Wireless Access Point of the router)
- OS independent for Ethernet
- Microsoft Windows 98SE/ME/2000/XP for USB
- Web Browser support:
Microsoft Internet Explorer 4.0 (or later versions)
Netscape® Navigator 3.02 (or later versions)

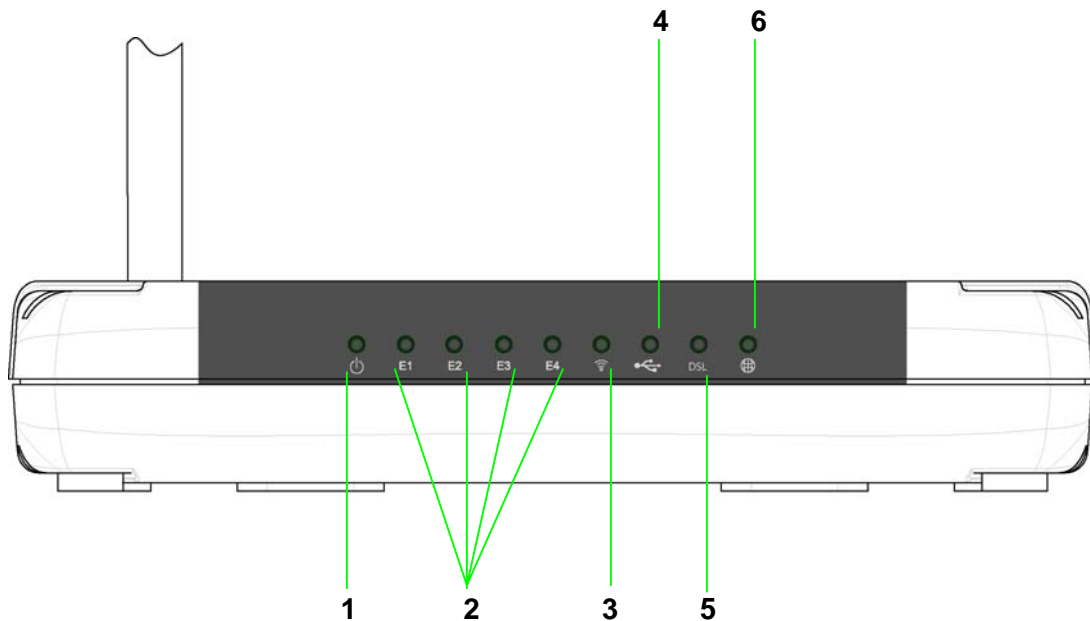
Wireless ADSL Router Package

For any missing items, please contact your dealer immediately.



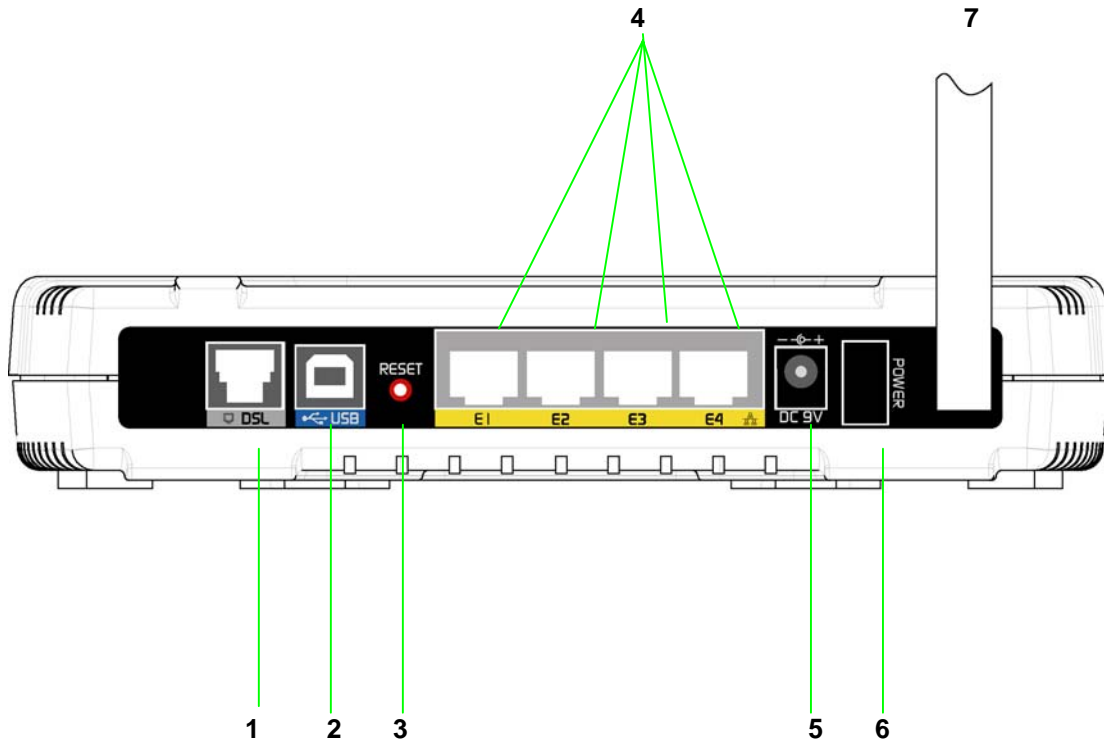
Wireless ADSL Router Overview

Front Indicators



- 1 POWER**
Lights up when power is supplied to the Wireless ADSL Router.
- 2 ETHERNET (E1 ~ E4)**
Lights up when the Ethernet cable is properly connected from your Wireless ADSL Router to the Ethernet Card.
Flickers when the ADSL is transmitting/receiving data.
- 3 WIRELESS**
Flickers when the Wireless LAN is operational.
- 4 USB**
Lights up when the USB cable is properly connected from your Wireless ADSL Router to the USB slot.
Lights Off when the USB cable is not connected or it is properly disconnected.
- 5 DSL**
LED light off when no Telephone jack (RJ-11) is connected.
Flickers when the Wireless ADSL Router is trying to establish a connection with the ADSL Service Provider (Training).
Steady Green Light when the ADSL connection is established.
- 6 Internet**
Green LED Lights up when the PPP connection is established.
LED Light off when no PPP connection.

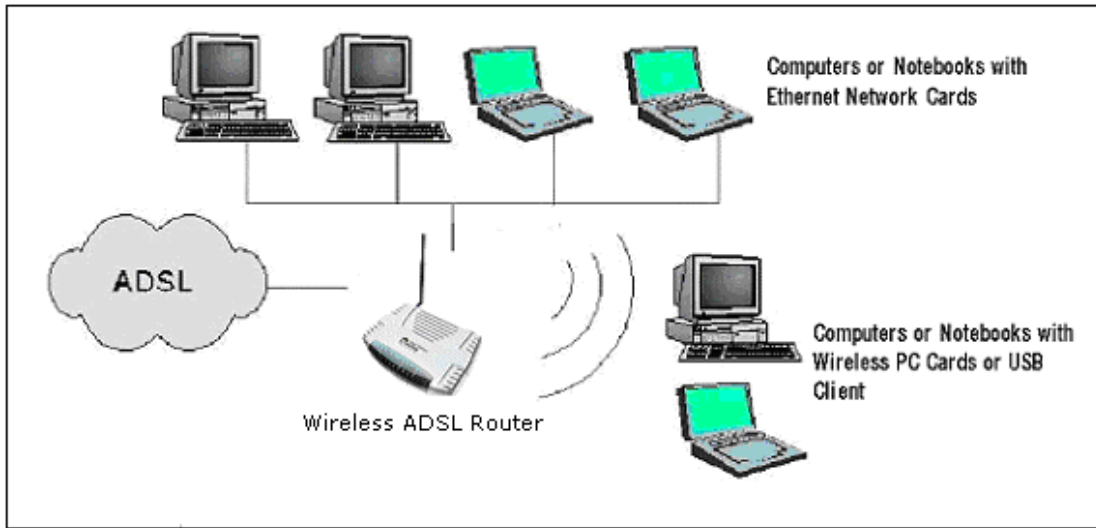
Back Panel



- 1 **DSL**
Telephone jack (RJ-11) to connect to your Telephone Wall Socket (DSL line).
 - 2 **USB**
USB jack to connect to your PC's USB slot.
 - 3 **RESET**
To reset your Wireless ADSL Router to factory default settings. (All customised settings that you have saved will be lost!). Please refer to the below footer² on how to activate the reset function.
 - 4 **ETHERNET (E1-E4)**
10/100 Base-T Auto-MDI/MDIX Ethernet jack (RJ-45) to connect to your PC's Ethernet Network card or Ethernet Hub / Switch.
 - 5 **DC IN (9V)**
To connect to the Power Adapter that comes with your package.
 - 6 **POWER SWITCH**
To power on or off the modem.
I - indicates ON position
O - indicates OFF position.
 - 7 **RF Antenna**
180° 2.4Ghz Wireless Antenna.
- 2 **To activate the reset function:**
- Ensure that your Wireless ADSL Router is powered on.
 - Use a paper clip or a pencil tip to depress the reset button, hold for at least 5secs and release. At this point, the **Wireless** indicator and **DSL** indicator will go off, the reset is in progress.
 - When the **Wireless** indicator starts blinking, it means that the reset process is completed. The default settings are now restored.
 - DSL line is synchronized once the **DSL** indicator colour is steady green.

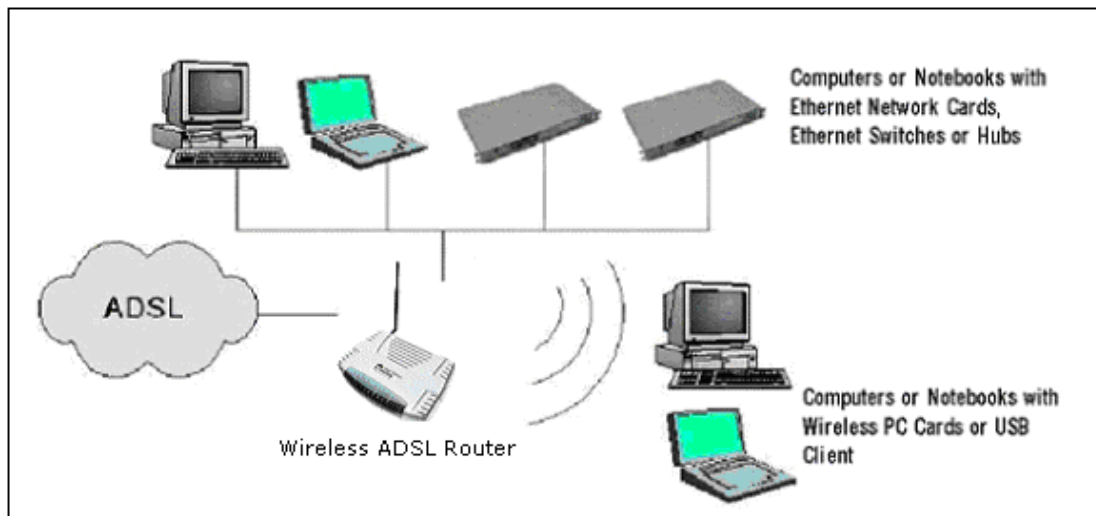
Typical Wireless ADSL Router Connections

Up to 4 PCs Connections



For More than 4 PCs Connections

To connect to more than 4 computers/notebooks, you may further expand one of the Ethernet Ports via an Ethernet Hub/Switch. For details on how to connect to the Ethernet Switch/Hub, please refer to the documentation that comes with the unit.



With the Auto MDI/MDIX feature, both cross and straight UTP cable can be utilized.

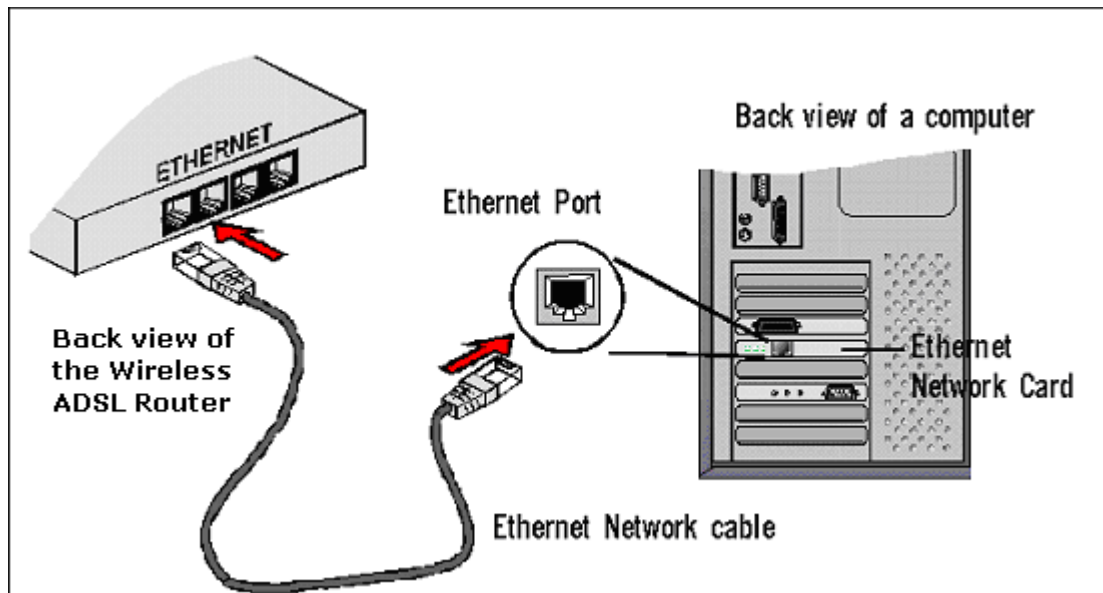
Chapter 1: Connecting the Wireless ADSL Router to Your Computer/Notebook



Power off your Computer/Notebook or/and any connected devices before connecting to the Wireless ADSL Router!

1.1 Connecting to the Ethernet

Connect your computer(s)/notebook(s) to the Wireless ADSL Router as illustrated. The following illustration shows the connection of a single computer.



NOT SURE HOW THE ETHERNET PORT LOOKS LIKE?

The following are some tips to help you locate your Ethernet Ports on your Computer/Notebook. Alternatively, you may refer to the documentation that comes with your Computer/Notebook.

Locating the Ethernet Port on your Computer/Notebook

Most Computers/Notebooks have labels describing the Ports. For Ethernet Port, you will see either ETHERNET, ETH or RJ45 labelled near the Port.

If your Computer/Notebook does not have such descriptions, try the following.

- Picture A gives the illustration of an Ethernet Port. All Ethernet Ports have 8 conductors on it. Do not mistaken with the LINE Port (Picture B) that has only 6 conductors.
- The Ethernet Port is slightly bigger than the LINE Port.



A. ETHERNET

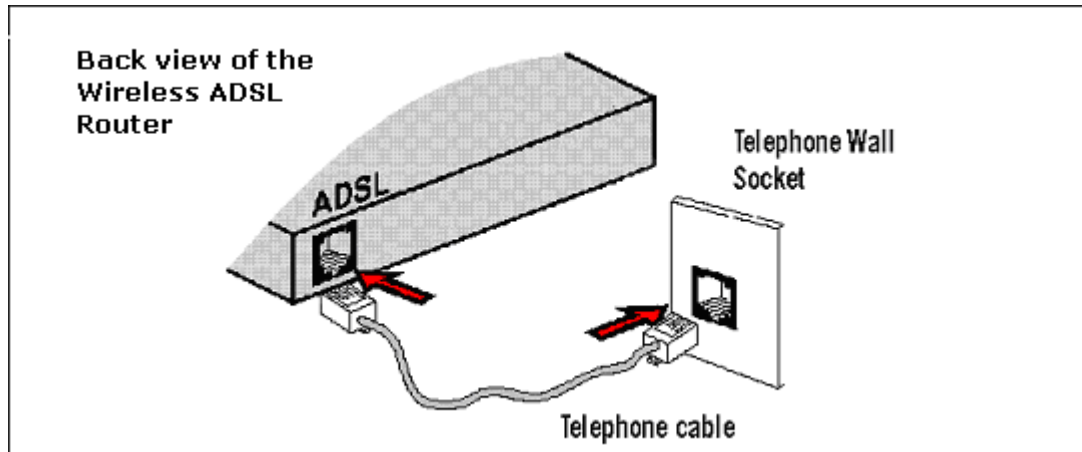


B. LINE

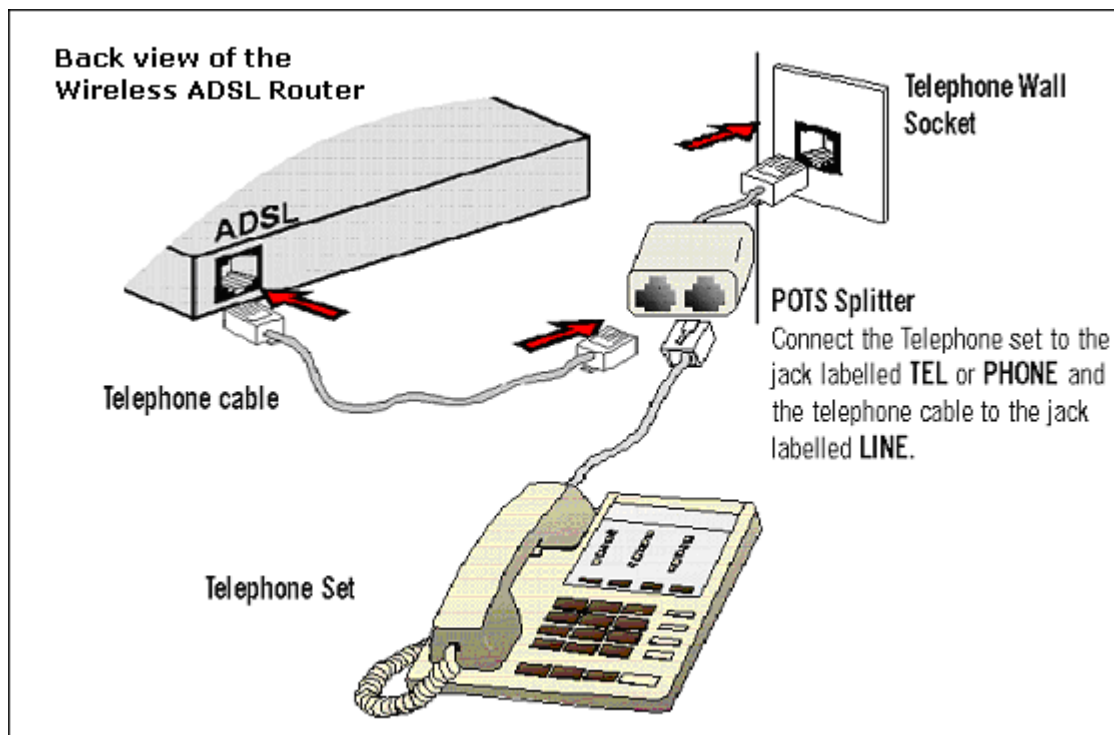
1.2 Connecting to the ADSL Line

To connect the **Wireless ADSL Router** to the **ADSL line** carried out **Chapter 1.2(a)**.
To connect the **Wireless ADSL Router** to the **ADSL line** and a **Telephone set**, carried out **Chapter 1.2(b)**.

(a) To connect to the ADSL line



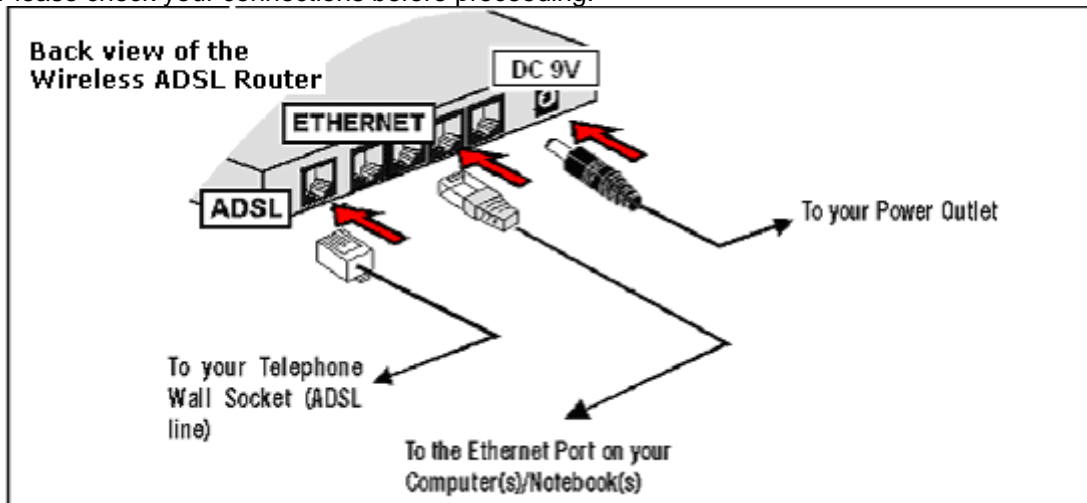
(b) To connect to the ADSL line and Telephone Set



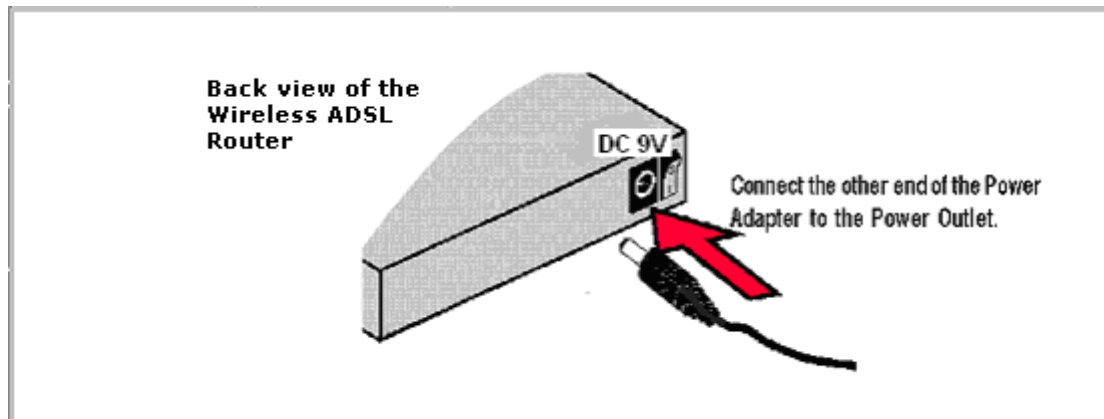
The POTS Splitter (with built-in Microfilter) is a device that allows you to connect both your Telephone cable and Telephone Set to the same Telephone Wall Socket. The device at the same time helps to eliminate background noise on the telephone line, ensuring the best possible phone performance. The POTS Splitter (*Optional*) is not provided in the package.

1.3 Checking Your Connections

Please check your connections before proceeding.



1.4 Connecting to the Power Outlet



1.5 Powering On

Power on the Power Outlet that is connected to your Wireless ADSL Router.
Power on your Computer(s)/Notebook(s).

Please proceed to [Chapter 2](#)

Chapter 2: Configuring Your Ethernet Network Card / Installing Your USB Device



If your computer/notebook is connected to the **Ethernet Port** of the Wireless ADSL Router, proceed with **chapter 2.1**. If your computer/notebook is connected to the **USB Port** of the Wireless ADSL Router, proceed with **chapter 2.2**. If your computers/notebooks are connected to both the Ethernet Port and USB Port of your Wireless ADSL Router, please proceed with both **chapter 2.1** and **2.2**!

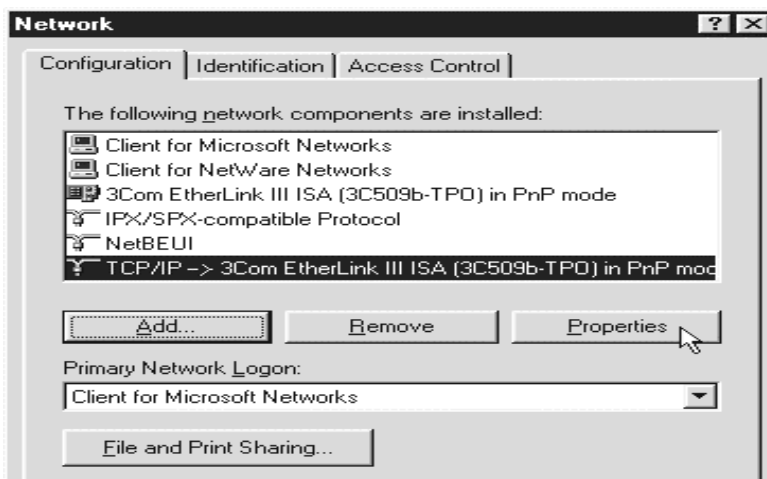
2.1 Configuring Your Ethernet Network Card



1. Proceed with this section **ONLY** if your computer/notebook is connected to the Ethernet Port of your Wireless ADSL Router.
2. The following illustrated screen shots serve only as examples. For any dissimilarities, please follow closely the instructions prompted on your Computer.

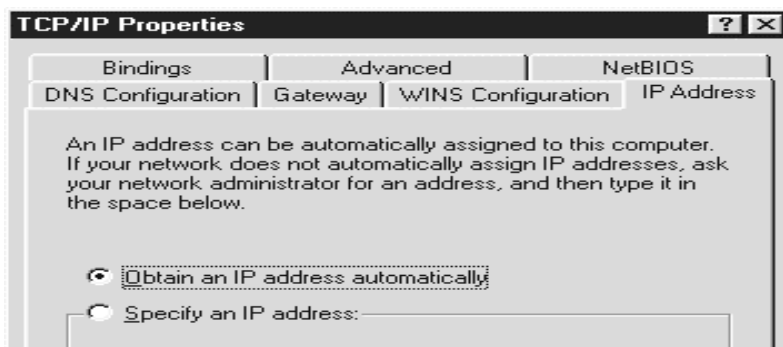
2.1.1 For Windows[®] 98 Second Edition / Windows[®] Me

- i From your Windows desktop, right-click on the **Network Neighborhood** icon. Select **Properties**.
- ii From the **Configuration** tab, select **TCP/IP-> xxx** where **xxx** refers to **the model of your Ethernet Card that is connected to your Wireless ADSL Router**. Click **Properties**.



(This screen shot uses **3Com EtherLink** Ethernet card model as an example).

- iii Click the **IP Address** tab.
Click the option **Obtain an IP address automatically** and click **OK** to save the settings.



Ensure that your Wireless ADSL Router is powered on. Restart your system. Proceed to [Chapter 3](#).

2.1.2 For Windows® 2000 / Windows® XP

- i Windows® 2000:
 - a) From your Windows desktop, right-click on the icon [My Network Places](#) and select [Properties](#).
 - b) At the [Network and Dial-up Connections](#) window, right-click on the [Local Area Connection](#) icon and select [Properties](#).

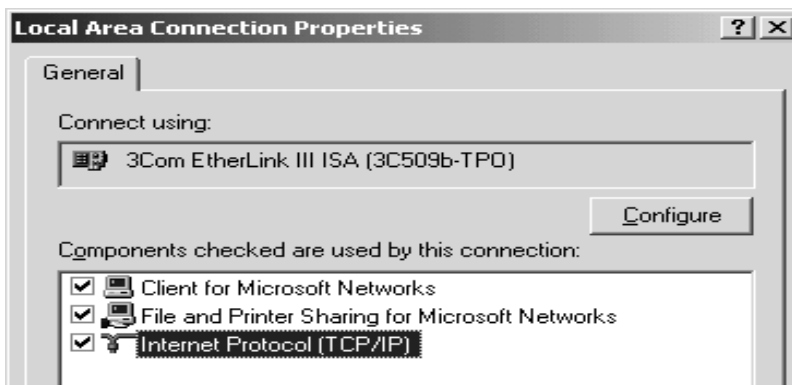
Windows® XP:

(Instructions are based on default Start menu option)

- a) From your Windows desktop, click [Start](#) > [All Programs](#) > [Accessories](#) > [Communications](#) > [Network Connections](#).
 - b) Right-click on the [Local Area Connection](#) icon that reflects the model of your Ethernet Card that is connected to your Wireless ADSL Router and click [Properties](#).
- ii Ensure that the field **Connect Using** indicates the model of your Ethernet Card that is connected to your Wireless ADSL Router.

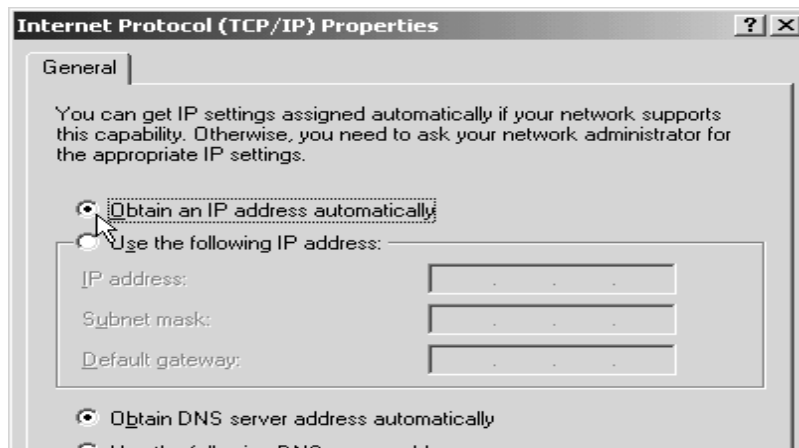
(This is important especially if you have more than one [Local Area Connection](#) icons displayed at the [Network and Dial-up Connections / Network Connections](#) window. Ensure that you have selected the correct one.)

Select **Internet Protocol (TCP/IP)** and click **Properties**.



(This screen shot uses **3Com EtherLink** Ethernet card model as an example).

- iii Select the option **Obtain an IP address automatically** and click **OK**.



Click **OK** again to close.

Ensure that your Wireless ADSL Router is powered on. Restart your system.
Proceed to **Chapter 3**.

2.2 Installing the USB Device Driver



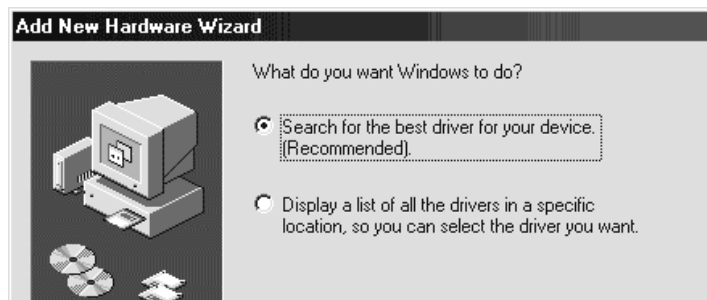
1. Proceed with this section **ONLY** if your computer/notebook is connected to the USB Port of your Wireless ADSL Router!
2. The following screen shots illustrated serve only as examples. For any dissimilarities, please follow closely the instructions prompted on your Computer/Notebook.
3. For Windows® 98 Second Edition users, you may be prompted for your Windows CD-ROM. Have it ready by your side.

2.2.1 Installing the USB Device Driver - For Windows® 98 Second Edition

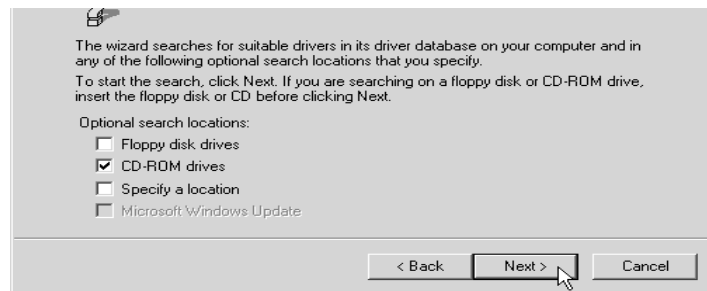
- i Power on your computer to start Windows.
- ii Place the **Installation CD** into your CD-ROM Drive
- iii At the following prompt, and click **Next**.



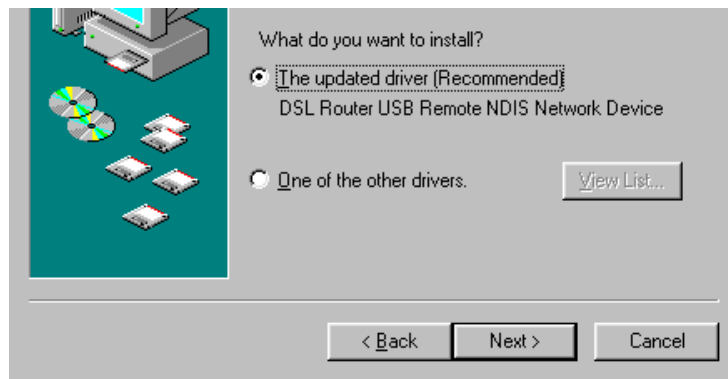
- iv Select **Search for the best driver for your device (Recommended)** option and click **Next**.




- v Click **CD-ROM drives** option and click **Next**.



- vi Select **The updated driver (Recommended) DSL Router USB Remote NDIS Network Device** and click **Next**.



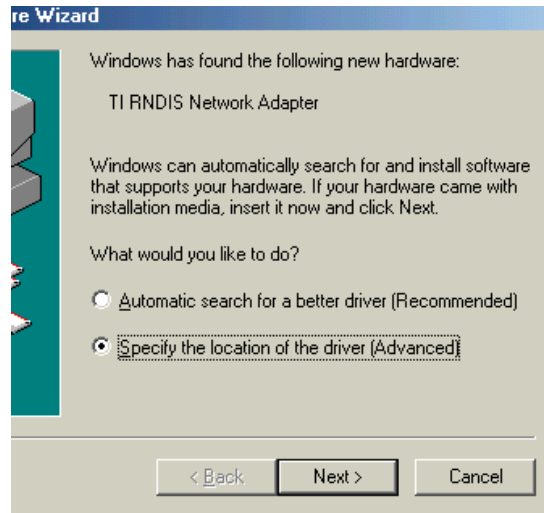
- vii Click **Next** to proceed installation with the indicated driver.

 Depending on your system configurations, you may be prompted for your Windows CD-ROM during installation. At the prompt, replace the **Installation CD** in your CD-ROM Drive with your **Windows CD-ROM** and click **OK**. At the **Copying Files** dialog box, enter the path of your Windows CD-ROM and click **OK**.

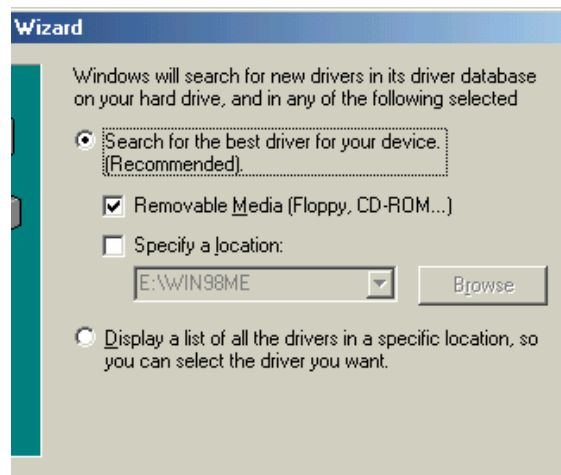
- viii Click **Finish** to complete the USB driver installation.
- xi Restart your system when prompted.
Proceed to **Chapter 3**.

2.2.2 Installing the USB Device Driver - For Windows® Me

- i Power on your computer to start Windows.
- ii Place the **Installation CD** into your CD-ROM Drive.
- iii At the following prompt, select **Specify the location of the driver (Advanced)** option and click **Next**.



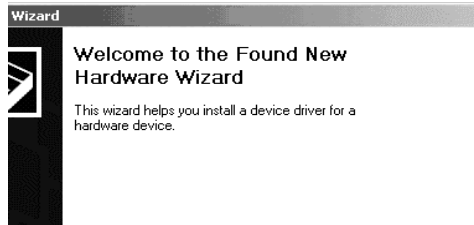
- iv Click **Removable Media** option and click **Next**



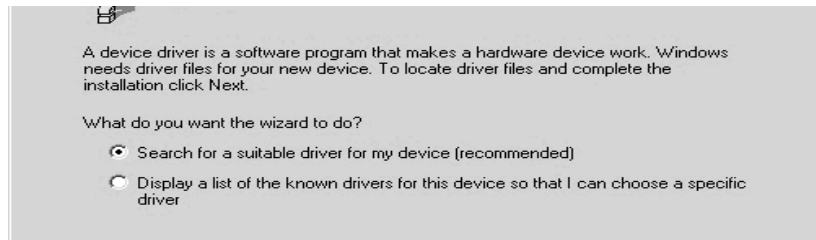
- v Click **Next** again to proceed installation with the indicated driver.
- vi Click **Finish** to complete the USB driver installation.
- vii Restart your system when prompted.
Proceed to **Chapter 3**

2.2.3 Installing the USB Device Driver - For Windows® 2000

- i Power on your computer to start Windows.
- ii Place the **Installation CD** into your CD-ROM Drive.
- iii At the following prompt, click **Next**



- iv Select **Search for a suitable driver for my device (recommended)** option and click **Next**.



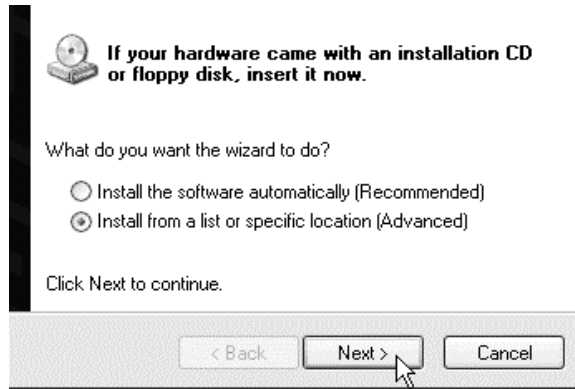
- v Click **CD-ROM drives** option and click **Next**.
- vi At the next prompt, click **Next** to proceed installation with the indicated driver.
- vii You may be prompted with **Digital Signature Not Found** dialog box during installation. (This happens when Windows detects your driver as a new version). Click **Yes** to proceed with the installation.



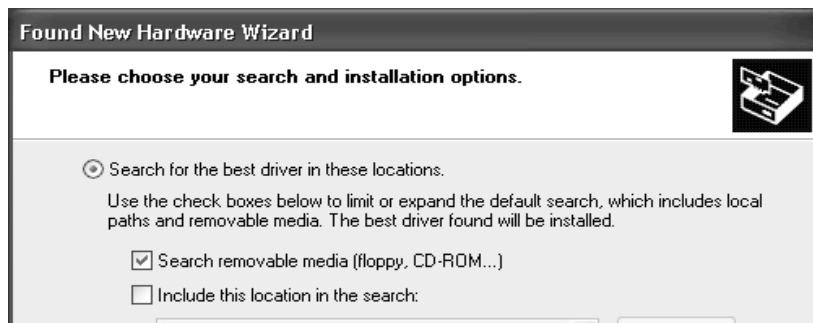
- viii Click **Finish** when prompted. Upon completion, proceed to **Chapter 3**.

2.2.4 Installing the USB Device Driver - For Windows® XP

- i Power on your computer to start Windows.
- ii Place the **Installation CD** into your CD-ROM Drive.
- iii At the following prompt, select **Install from a list or specific location (Advanced)** option and click **Next**.



- iv Click **Search removable media** option and click **Next**.



- v Click **Finish** to complete the first stage of the USB driver installation.
- vi Repeat **step ii and iii**.
- vii You may be prompted with **Hardware Installation** dialog box. (This happens when Windows detects your driver as a new version).
Click **Continue Anyway** to proceed with the installation.



- viii Click **Finish** when prompted. Upon completion, proceed to **Chapter 3**.

Chapter 3: Configuring Your Internet Browser

3.1 Microsoft® Internet Explorer™ (based on IE 5.5)

- i From your Windows desktop, double-click on your Internet Explorer icon to launch your Browser.



- ii From the Menu, click **Tools** and select **Internet Options...**
- iii Select the **Connection** tab. Click the field, '**Never dial a connection**'. (This option will be grayed off if you have not installed an analog modem on your computer/notebook before. Proceed with **3.1 iv**).
- iv Click the **LAN Settings...** button. Ensure that your **Proxy Server** is not enabled.
- v Click **OK** to close the dialog box.

You may now proceed to **Chapter 4** or **Chapter 5**.

3.2 Netscape® Navigator

- i From your Windows desktop, double-click on your Navigator icon to launch your Browser.



- ii Depending on your Netscape versions, carry out one of the following instructions:
Click **Options > Network Preferences**.
Select **Proxies**. Ensure that the **No Proxies** option is selected.
OR
Click **Edit > Preferences**.
Select **Advanced** and click **Proxies**. Ensure that the option **Direct Connection to the Internet** is enabled.
- iii Click **OK** for changes to take effect.

You may now proceed to **Chapter 4** or **Chapter 5**.

Chapter 4: Setup Wireless ADSL Router via Utility

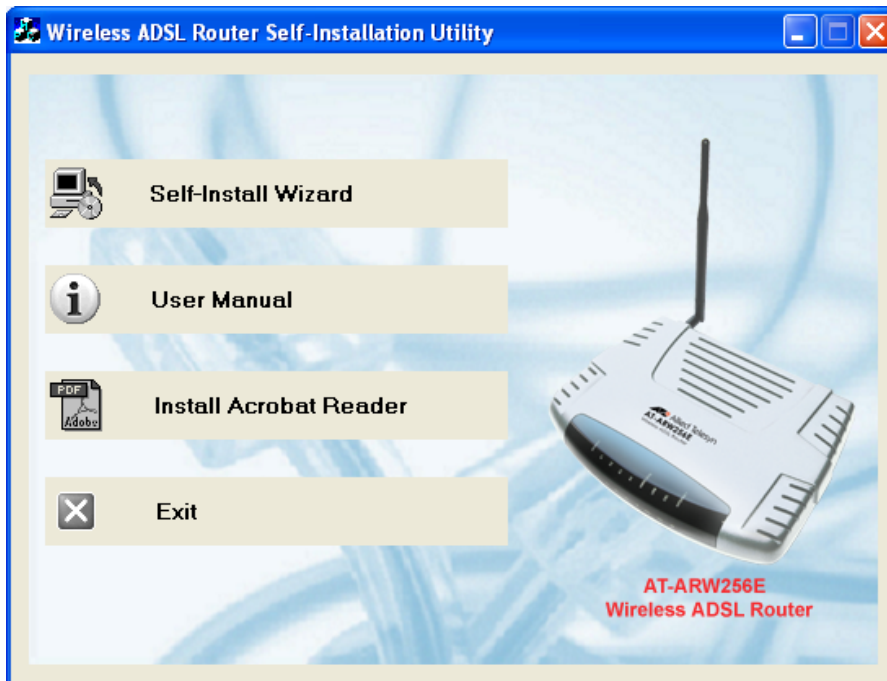
(For Windows 98 SE/ ME/ 2000/ XP Users ONLY)



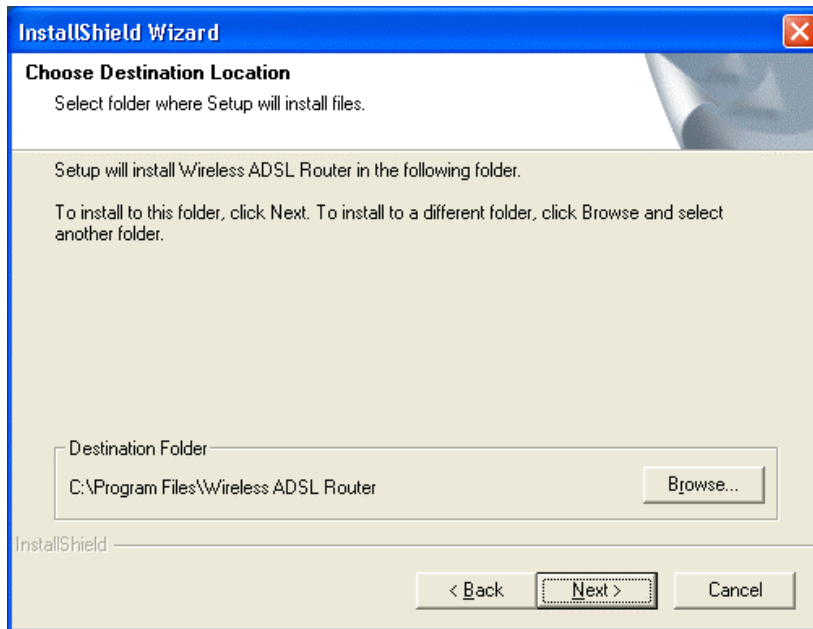
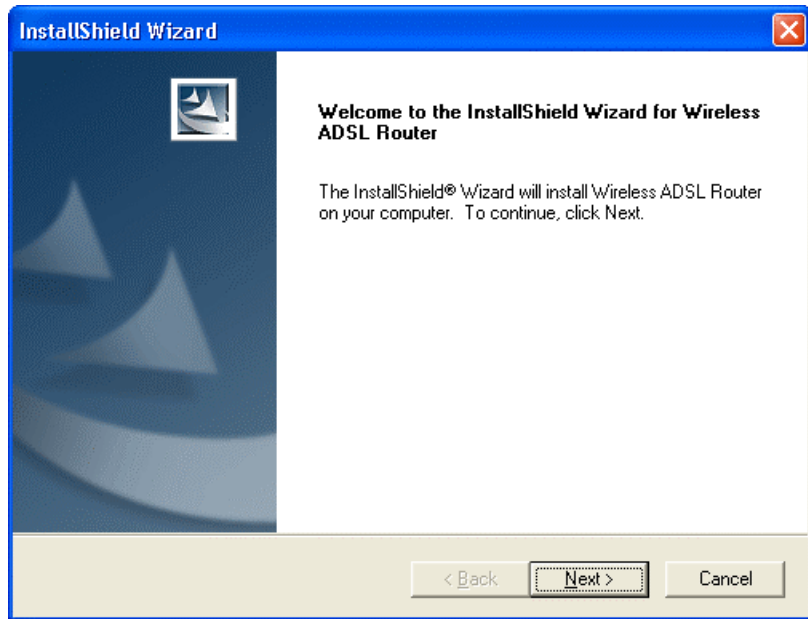
This chapter is only for Windows User, please use the Wireless ADSL Router Utility Installation CD provided to setup the Wireless ADSL Router Utility



4.1 Install Wireless ADSL Router Self-Installation Utility.

- i Insert the Wireless ADSL Router Self-Installation CD into the CD-ROM drive. The utility will auto-run and the screen as shown below will appear. (Note: If it does not auto-run, access to the CD-ROM drive and execute **CDWizard.exe**). Further information will be available when you position the mouse cursor over the available options.



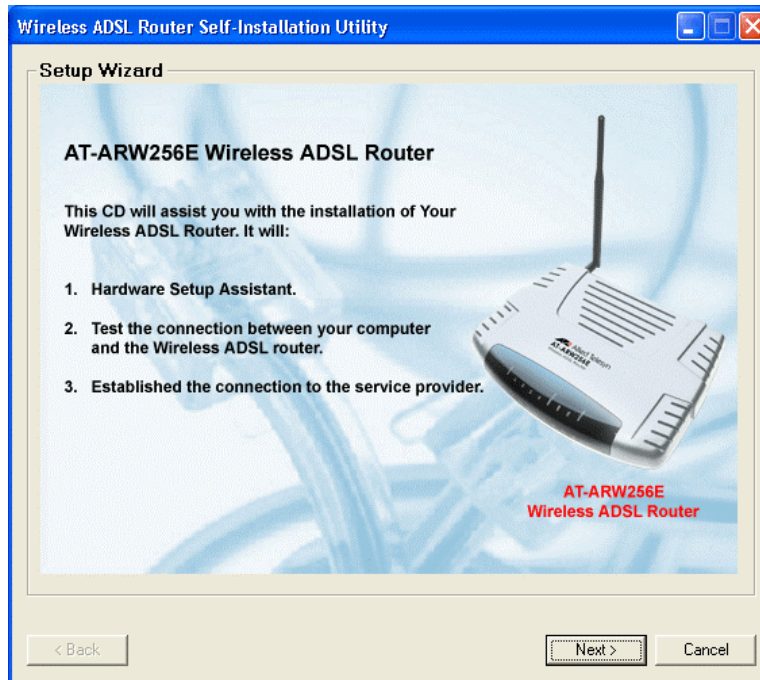
- ii Please click "Next" to proceed with the installation of the Wireless ADSL Router utility.



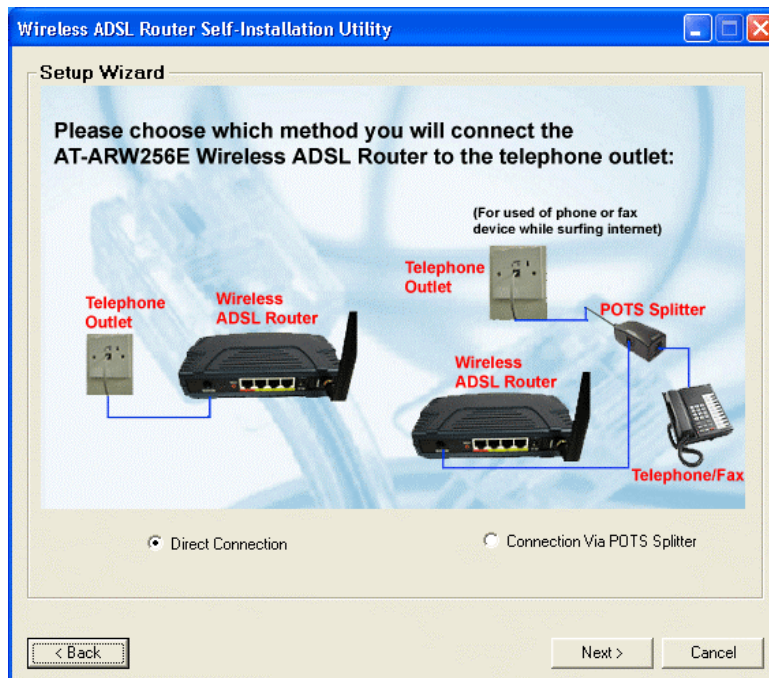



After installation, a Wireless ADSL Router Connection shortcut icon will be created on the desktop. It will allow the user to connect or disconnect from the Internet.

iii Please read the relevant information and click “Next” to proceed.



iv Please determine which method you want to connect the Wireless ADSL Router to the telephone outlet. You can choose “**Direct Connection**” or “**Connection Via POTS Splitter**” (*optional*) then click “Next” to continue.





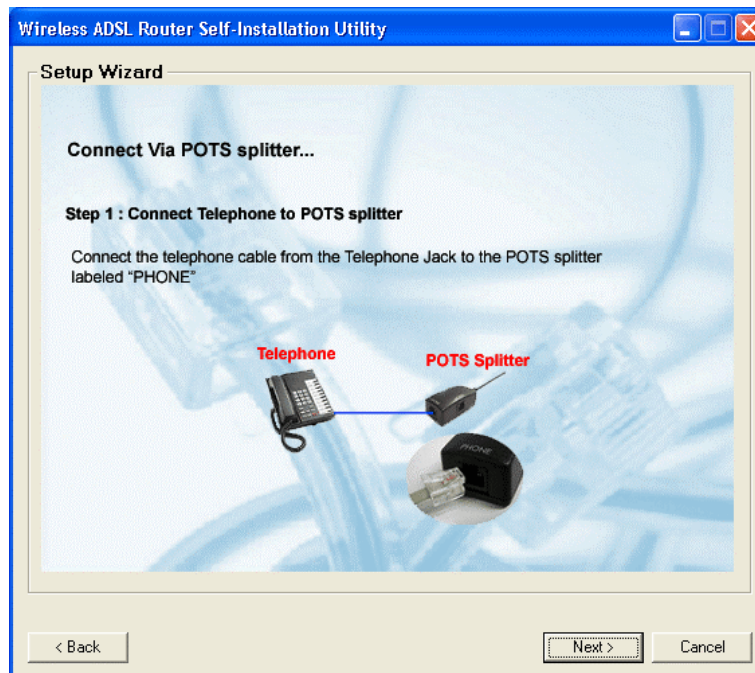
Please refer to the next screen if you select **“Direct Connection”**, if you have selected **“Connection Via POTS Splitter” (Optional)**, please skip to vi (b)

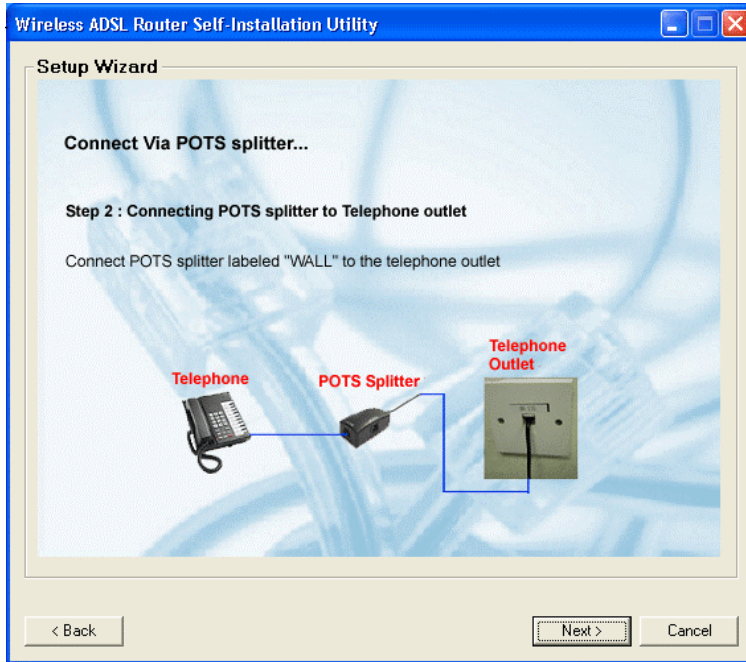
vi

- a) Previously if you have chosen **“Connection Via POTS Splitter”**, please follow the instructions below. Click **“Next”** to continue.

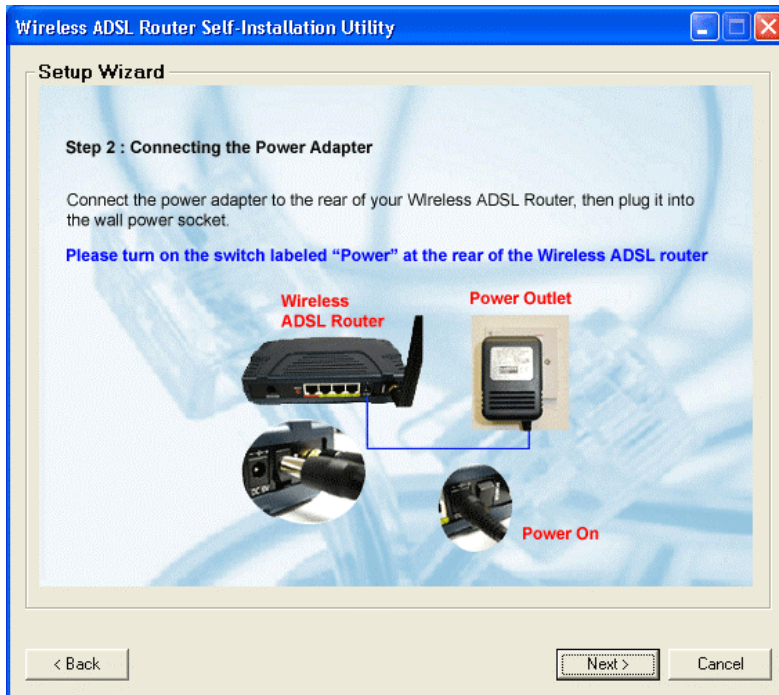


- b) Previously if you if you have chosen **“Direct Connection”**, please follow the pictorial directions for the next 3 screens as displayed below. Click **“Next”** to continue.

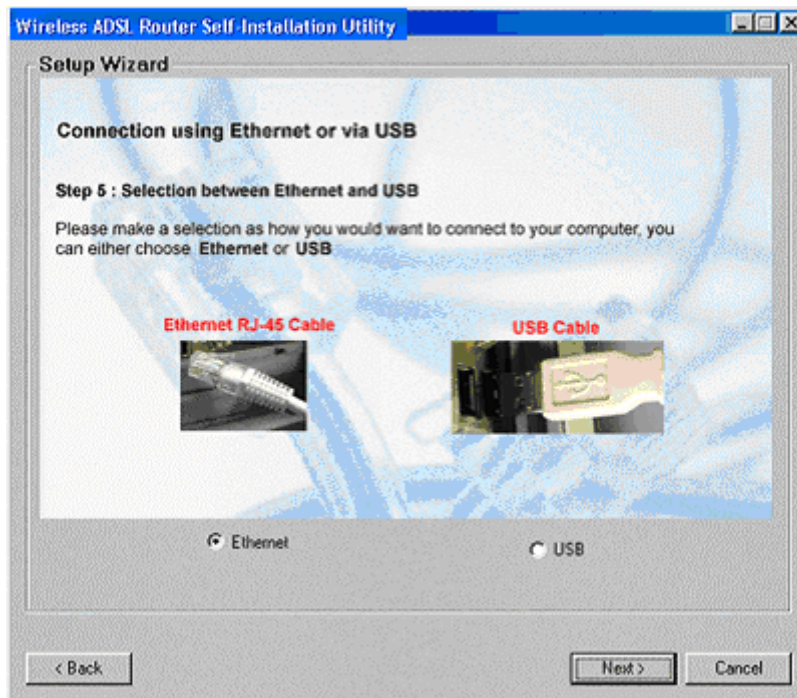




- vii Please follow the instructions on how to switch on the power for your Wireless ADSL Router. Click “Next” to continue.

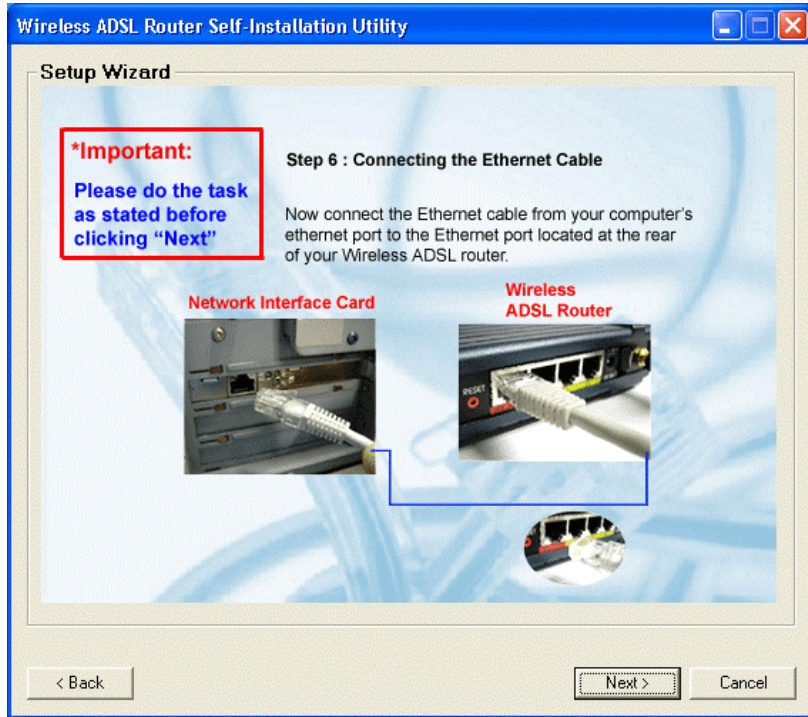


- viii Please make a choice on how you would like to connect to the Wireless ADSL Router. You may choose **Ethernet** or **USB**. Click “Next” to continue.

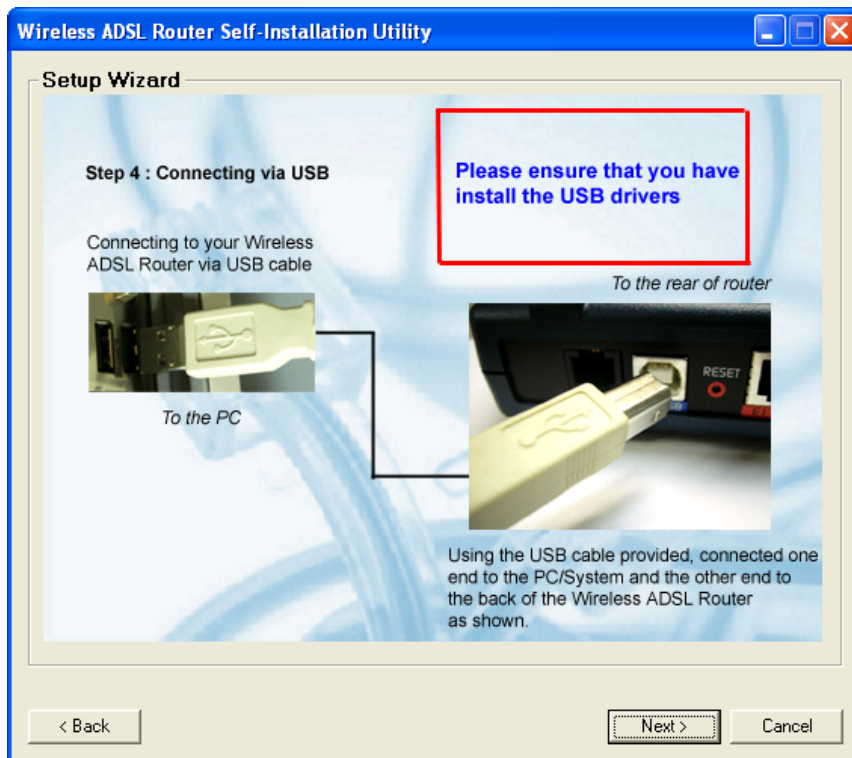


Please refer to the next screen if you have selected “**Ethernet**”, if you have selected “**USB**”, please ensure that you’ve installed the driver (refer to **xi(b)**)

a) Please follow the diagram closely on how to setup the connection from your computer to the Wireless ADSL Router via Ethernet. Click "Next" to continue.

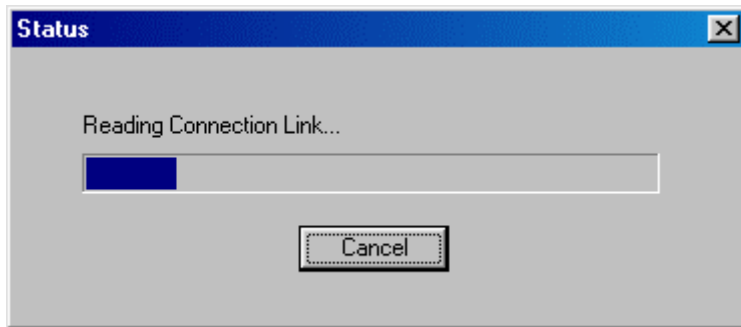


b) Please follow the diagram closely on how to setup the connection from your computer to the Wireless ADSL Router via USB. Click "Next" to continue.

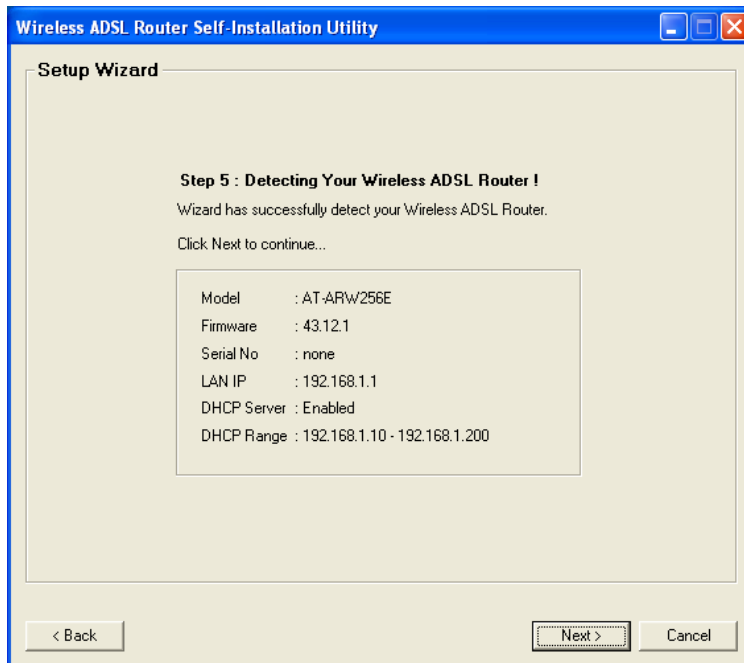


IMPORTANT : Please refer to Chapter 2.2 to install the USB driver

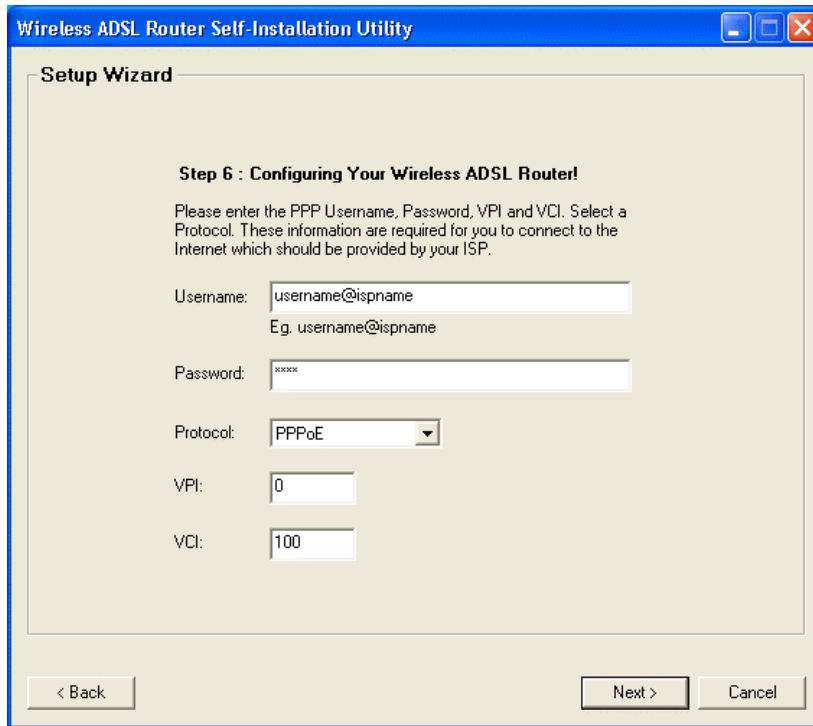
- x Status window will display the processing status of how the Wireless ADSL Router is communicating with the computer via Ethernet or USB.



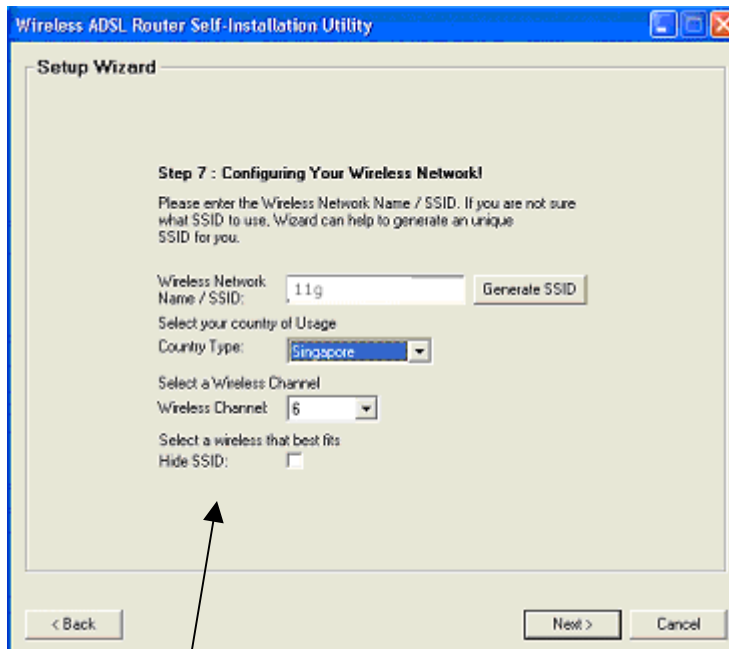
- xi Upon success detection of the Wireless ADSL Router, the relevant information will be displayed as the screen below. Click "Next" to continue.



- xii For connecting to the Internet, please enter the username and password, VPI and VCI provided by your ISP. You need to select the protocol. Click “Next” to continue. **Please contact your ISP if you are unsure of what to enter.**

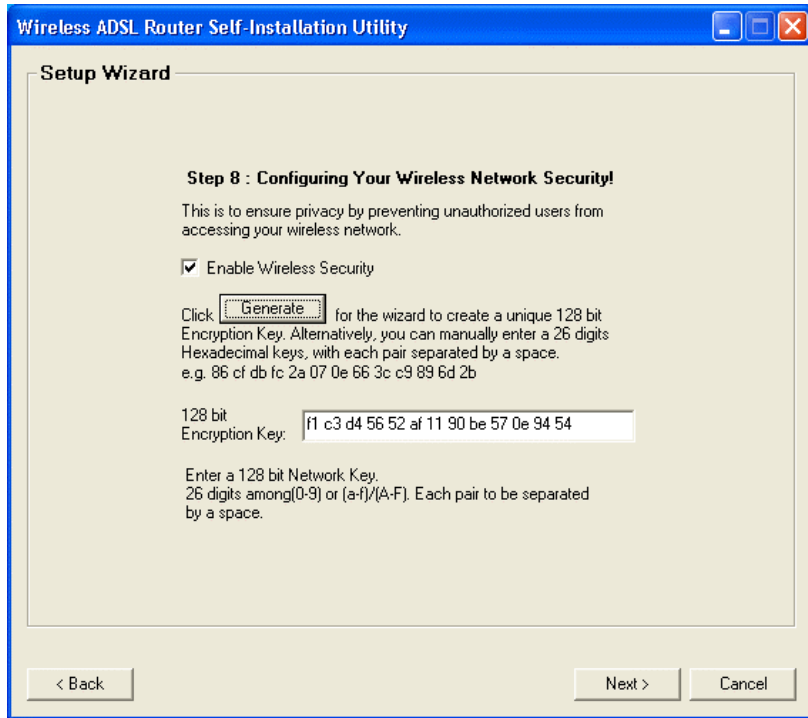


- xiii You can enter the SSID or choose to generate a SSID, select country type and wireless channel to configure your wireless settings. Click “Next” to continue.

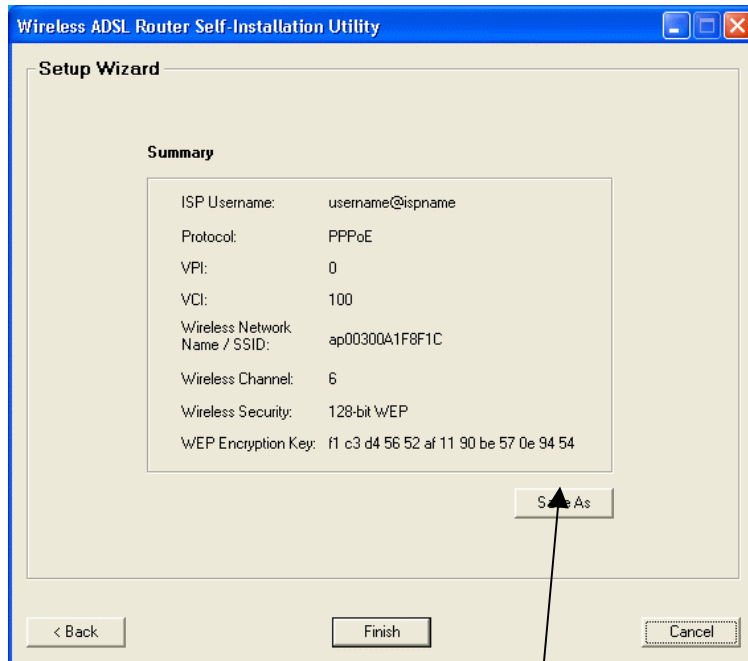


Note: For better security, you may choose to hide the SSID of your Wireless ADSL Router from broadcasting to available clients. However you must manually set you wireless client with the same SSID.

- xiv You can choose to enable your wireless security option. When enabled you will be able to either manually enter a 26 digit HEX keys or auto-generate the encryption key by clicking on the “Generate” button. Click “Next” to continue.

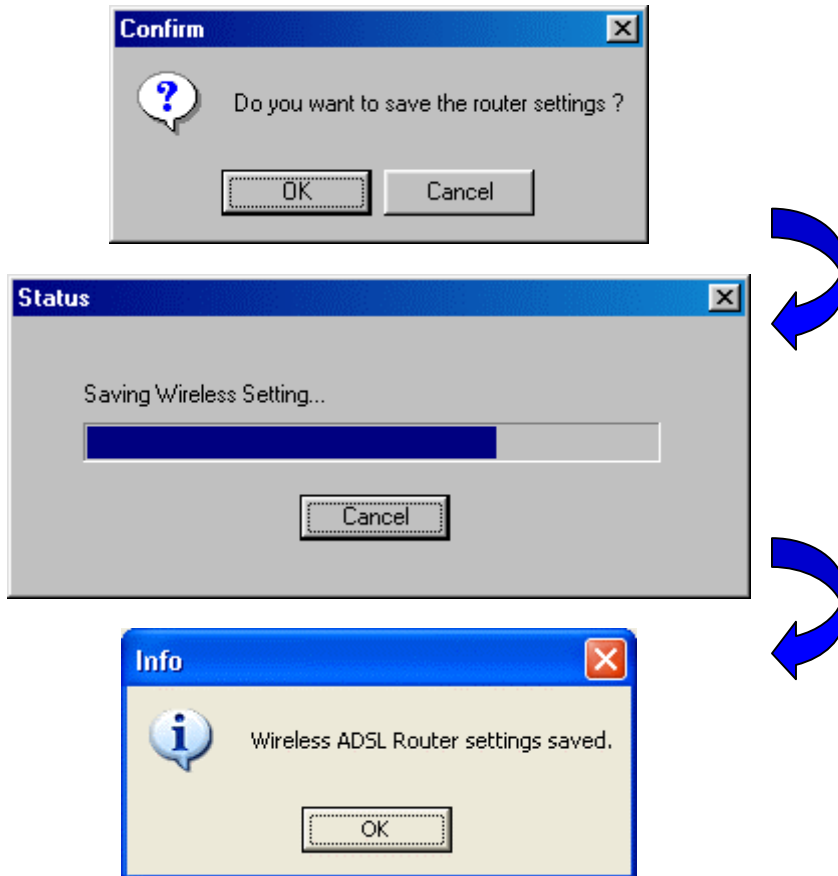


- xv You have now completed setting up your Wireless ADSL Router. A summary page as shown will let you review all the settings. Click “Finish” to confirm or “Back” to make changes.

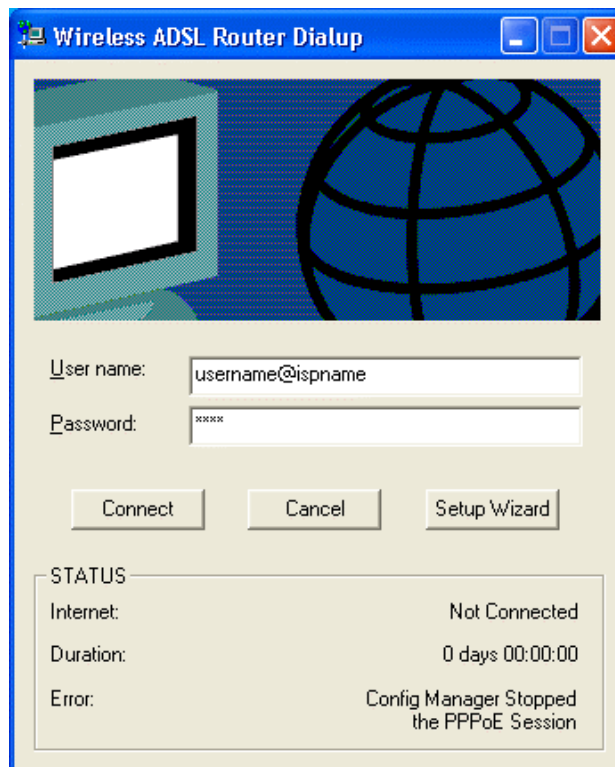



Note: You may want to have a reference of the wireless information to configure your wireless client. Click on “Save As” button to save these into a file.

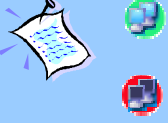
xvi You will be prompted to save the router settings. Click “OK” to save.



xvii After saving the configuration, Wireless ADSL Router Dialup screen will be prompted as shown below. You can confirm your ISP’s Username and Password, and click on “Connect” for connecting to the Internet.



- xviii Upon successfully connection, the Dialup application will be minimize and an  icon will be created at the right-hand bottom of the task bar. Your home webpage will be launched automatically and the info screen displayed below will minimize automatically.



This icon symbolized the Wireless ADSL Router is connected to the Internet

This icon symbolized that the Wireless ADSL Router is not connected to the Internet

Important:

Router Default Setting

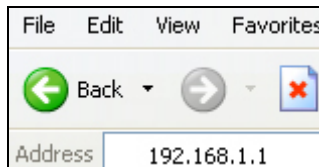
Firmware version	43.12.1
Protocol	PPPoE
VPI / VCI	0 / 35
DSL Configuration	Multimode
LAN IP Address	192.168.1.1
Netmask	255.255.255.0
DHCP Server	Enable
DHCP Range	192.168.1.2 to 192.168.1.254
NAT	Enable

Remark : Currently Self Installation Wizard from the Installation CD has **its default at PPPoE and VPI/VCI is 0/35**. To change the VPI/VCI setting, please follow below steps:

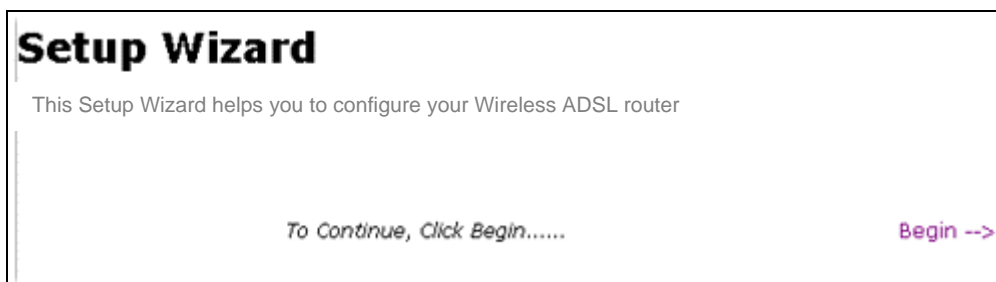
- i) Enter <http://192.168.1.1> in the Internet Explorer address bar.
- ii) At the top menu, click on the "Basic" button.
- iii) On the left side menu, click on "Quick Start" link.
- iv) Click on Protocol dropdown list to select your desired protocol.
- v) Change your VPI and VCI.
- vi) Click on "Connect" to apply the changes and try connecting to the Internet.

Chapter 5: Setup Wireless ADSL Router Via Web Setup Wizard

- i From your Internet Browser, key in 192.168.1.1 at the address bar and hit <Enter>



- ii Upon Login successfully, the Setup Wizard page will be displayed. Next click on Begin.



- iii You need to enter the Username, Password, VPI and VCI provided by the ISP. Click on Next.

A screenshot of the "Internet Login Account Setting" page. The title "Internet Login Account Setting" is in large, bold, black font. Below the title, the text reads: "This information should be provided by your Internet service provider." There are four input fields: "Username" with a placeholder "username@ispname" and a note "e.g. username@ispname" and "Enter your Internet connection username"; "Password" with a masked field of ten dots and the instruction "Enter your Internet connection password"; "VPI" with a field containing the number "0"; and "VCI" with a field containing the number "100". At the bottom, there is a purple link "<-- Back", a line of text "To Continue, Click Next.....", and a purple link "Next -->".

- iv You can enter their SSID or let the setup wizard auto-generate a SSID by clicking on "Generate SSID". You are allowed to select your country standard for wireless LAN in "Country Selection, select a wireless channel and can choose whether to hide the SSID. Click on Next.

Wireless LAN Configuration

This is to specify the network name of your wireless local area network

Wireless Network Name / SSID

Enter a name (SSID) for your wireless network.

OR

Request Setup Wizard to generate a unique SSID for you.

Country Standard

Wireless Channel

Hide your Wireless Network Name / SSID

Note:

1. Your system's wireless network adapter must have the same SSID as the wireless router to access the network wirelessly
2. You can also make your Wireless Network Name/ SSID invisible to other wireless users by hiding your SSID.
3. Specify the wireless channel for your network. All wireless clients must use the same channel to access to the router.

<-- Back
To Continue, Click Next.....
Next -->

- v You can enable wireless security, auto-generate 128 bit encryption key or define your own key. Click on Next.

Wireless LAN Security

This is to ensure privacy by preventing unauthorized users from accessing your wireless network.

Enable Wireless Security

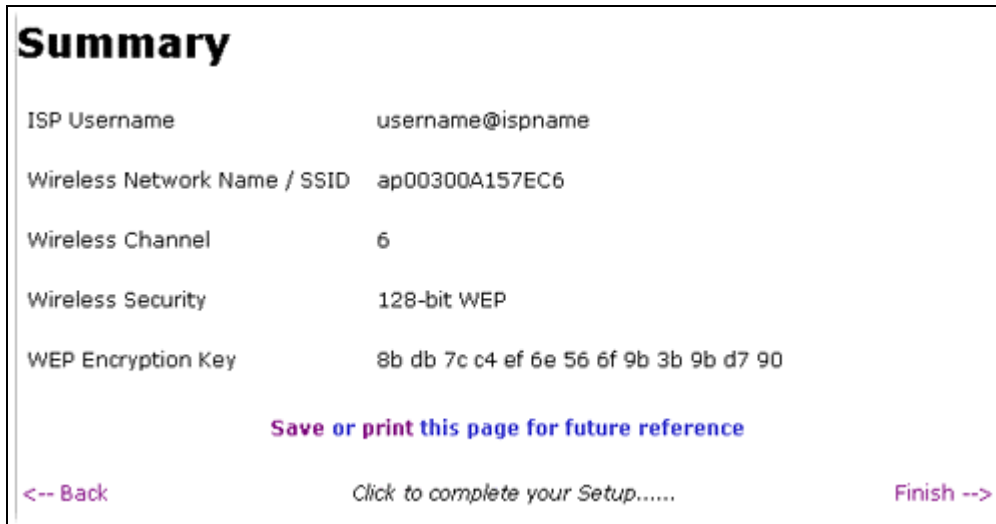
Click for the wizard to create a unique 128 bit Encryption Key. Alternatively, you can manually enter a 26 digits Hexadecimal keys, with each pair separated by a space. e.g. 86 cf db fc 2a 07 0e 66 3c c9 89 6d 2b

128 bit Encryption Key

Enter a 128 bit Network Key.
(26 digits among(0-9) or (a-f)/(A-F). Each pair to be separated by a space.

<-- Back
To Continue, Click Next.....
Next -->

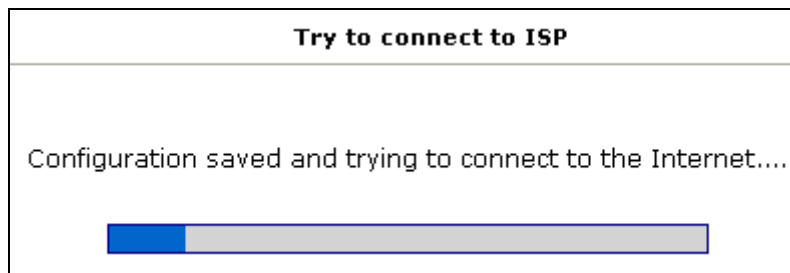
- vi You are able to view the summary to check through the all the information you have entered. It is advisable to either Save or print out the Summary information for entering into your wireless client. Click Finish to complete the setup.



- vii A notification for saving of settings and wireless device restarting will be prompted. You must click OK to proceed.



- viii A progress bar will be displayed to indicate connecting process to the Internet



- ix Upon successful connecting to the Internet, this page will be displayed.



- x The Home Page will display all the valid information

Home Page	
Connection Information	
DSL	Up
Downstream/Upstream(Kbps)	3488/448
Internet	Connected
User ID	username@ispname
IP Address	220.255.68.88
Default Gateway	203.125.64.1
DNS	Auto
<div style="display: flex; justify-content: space-around; width: 100%;"> <input type="button" value="Restart"/> <input type="button" value="Connect"/> </div>	
Router Information	
Model	AT-ARW256E
Firmware Version	43.12.1
Ethernet MAC address	00:30:0A:15:7E:D8
DSL MAC address	00:30:0A:15:7E:DA
USB MAC address	00:30:0A:15:7E:D9
NAT	Enabled
Firewall	Disabled
Local Network	
LAN IP Address	192.168.1.1
DHCP	Enabled
DHCP Range	192.168.1.10 - 192.168.1.200
Ethernet	Connected
USB	Disconnected
Wireless Network	